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U.S. Serial No.: 10/717,632

Docket No. SAIC0055-C-CIP2

REMARKS

Claim: 1-2, 4-5, 7-8 and 43-46 are pending in the current application. Claims 1 and 8 have been amended. Claims 3, 6 and 40-42 have been cancelled. The undersigned does not believe that the amendments provided necessitate a new search as all subject matter was previously presented in the claims. The claims have been addressed as follows in the non-final Office Action: claims 1-2, 4-5, 40-41 and 43-46 are rejected under 35 USC 103(a) as being unpatentable over Armistead, Negrelli and Swift; claims 3, 6, 8 and 42 are rejected under 35 USC 103(a) as being unpatentable over Armistead, Negrelli, Swift and Adams; and claim 7 is rejected under 35 USC 103(a) as being unpatentable over Armistead, Negrelli and Swift and Kubierschky.

The undersigned requests reconsideration of the rejections in view of the amendments and remarks set forth below.

Rejection of Claims 1-2, 4-5, 40-41 and 43-46 under 35 USC 103(a) in View of Armistead, Negrelli and Swift

Neither Armistead, Negrelli or Swift describe a neutron detector or neutron detection. Accordingly, no combination of these references can anticipate or render the current claims obvious.

Rejection of Claims 3, 6, 8 and 42 under 35 USC 103(a) in View of Armistead, Negrelli, Swift and Adams

The subject matter of claims 3, 6 and 42 has been incorporated into independent claim 1 by this amendment. Accordingly, the Office's rejection will be addressed with respect to claim 1 as amended herein. As stated above, no combination of Armistead, Negrelli and Swift can anticipate or render the current claims obvious. The Office relies on Adams (Pub.#2004/0256565) as teaching the missing limitations of claims 3, 6 and 42. Specifically, the Office states the following:

U.S. Serial No.: 10/717,632

Docket No. SAIC0055-C-CIP2

Regarding claim 3, although *Armistead, Negrelli and Swift* as applied above do not specifically disclose the second detector as a neutron detector, *Adams* teaches [0002, 0004], as is otherwise well known, that the use of additional sensing arrangements, such as passive sensing of neutrons for example, in conjunction with radiation imaging devices, allows for more advantageous examination of cargo containers by allowing for detection of radioactive or fissile material. As such, it would have been obvious to further modify the system to include a neutron detector so as to allow for a more versatile system capable of passive sensing of radioactive and fissile material.

Regarding claim 6, although not specifically disclosed, those skilled in the art appreciate that helium based neutron detectors are well known and, absent some degree of criticality, would have been a matter of routine design choice.

Regarding claim 42, in the system suggested by *Armistead, Negrelli and Swift* and *Adams* as applied above *Adams* discloses that the second detector is a neutron detector [0007]. Regarding the mode of operation as being always on (continuous) capable of being shut off by an operator (intermittent), such modes of operation are well known in the art and would have been obvious design choice depending on the needs of the application. The examiner further notes that the disclosure by *Adams* of the detection of an alert suggests a mode of operation that would be continuous. It is additionally noted, however, that *Armistead* further discloses that depending on the results of an initial inspection, additional measuring could be performed with the second detectors, such measuring suggesting an intermittent mode. Such disclosure suggests that either of the two modes would be an obvious design choice depending on the needs of the application.

As is evident from the rejections above, the Office is unable to find any actual teaching in *Adams* of either Helium neutron detectors or the continuous and intermittent modes of operation of the helium neutron detectors as claimed. Instead, the Office that "absent some degree of criticality" these limitations would be "routine design choice" or "obvious design choice." The Office has provided no statute, regulation, case law or even an MPEP cite which supports the acceptability of this rationale for supporting a *prima facie* case of obviousness. Since this reasoning is not provided for by statute or rule, the undersigned can only surmise that such a rationale is found in the case law. Per MPEP § 2144, the undersigned wishes to remind the Office that legal

U.S. Serial No.: 10/717,632

Docket No. SAIC0055-C-CIP2

precedent can provide the rationale supporting obviousness only if the facts in the case are sufficiently similar to those in the application.¹ Accordingly, in order to establish a *prima facie* case of obviousness using this rationale, the Office must first identify the legal precedent, i.e., case law, and next identify how the facts of the case are sufficiently similar to those in the current application.

The undersigned submits that the Office has failed to establish a *prima facie* case of obviousness for at least claims 6 and 42 which are now incorporated into claim 1. The Office does not provide a reference teaching the claimed helium detectors or modes, but merely states that they would have been "routine" or "obvious design choice." Again, no authority is given for this reasoning. Referring to MPEP 2144.03:

B. If Official Notice Is Taken of a Fact, Unsupported by Documentary Evidence, the Technical Line Of Reasoning Underlying a Decision To Take Such Notice Must Be Clear and Unmistakable

Ordinarily, there must be some form of evidence in the record to support an assertion of common knowledge. See *Lee*, 277 F.3d at 1344-45, 61 USPQ2d at 1434-35 (Fed. Cir. 2002); *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 (holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection). In certain older cases, official notice has been taken of a fact that is asserted to be "common knowledge" without specific reliance on documentary evidence where the fact noticed was readily verifiable, such as when other references of record supported the noticed fact, or where there was nothing of record to contradict it. See *In re Soli*, 317 F.2d 941, 945-46, 137 USPQ 797, 800 (CCPA 1963) (accepting the examiner's assertion that the use of "a control is standard procedure throughout the entire field of bacteriology" because it was readily verifiable and disclosed in references of record not cited by the Office); *In re Chevenard*, 139 F.2d 711, 713, 60 USPQ 239, 241 (CCPA 1943) (accepting the examiner's finding that a brief heating at a higher temperature was the equivalent of a longer heating at a lower temperature where there was nothing in the record to indicate the contrary and where the applicant never demanded that the examiner produce evidence to support his statement). **If such notice is taken, the basis for such reasoning must be set forth explicitly. The examiner must provide**

¹ The examiner must apply the law consistently to each application after considering all the relevant facts. If the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court. If the applicant has demonstrated the criticality of a specific limitation, it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection.

U.S. Serial No.: 10/717,632

Docket No. SAIC0055-C-CIP2

specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. See *Soli*, 317 F.2d at 946, 37 USPQ at 801; *Chevenard*, 139 F.2d at 713, 60 USPQ at 241. The applicant should be presented with the explicit basis on which the examiner regards the matter as subject to official notice and be allowed to challenge the assertion in the next reply after the Office action in which the common knowledge statement was made.

The Office has clearly failed to provide the required evidence or sound technical reasoning to support the rejection of claims 6 and 42. Further, as discussed above, the undersigned suspects the "design choice" rationale is based on some case law, but there is a process for applying such rationale, i.e., a showing of similar facts, etc. and that has not been done in the case.

Accordingly, even if a teaching for the limitation of claims 6 and 42 had been provided, there is no motivation to combine with the references cited.

Although the undersigned is not required to provide a rebuttal, since arguably no *prima facie* case has been established, the following is provided in an effort to further prosecution. In this case, the less expensive helium detectors as compared to the scintillation detectors described in Adams, may be used, even though they are microphonic and may produce spurious counts and lead to false alarms, when used in conjunction with the two modes of operation. The two modes of operation are designed to increase the sensitivity of the detectors to target generated neutrons (e.g., fissile cargo) while minimizing the effects of microphonics in the helium detectors. Accordingly, the invention allows for the use of inexpensive detectors in an environment that can cause significant microphonics while still meeting the sensitivity needs in searching targets.

The undersigned submits that the claims as amended are allowable over the art cited.

Rejection of Claim 7 under 35 USC 103(a) in View of Armistead, Negrelli, Swift and Kubierschky

For the reasons stated above with respect to independent claim 1, the undersigned submits that dependent claim 7 is also allowable.

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Docket No. SAIC0055-C-CIP2

CONCLUSION

The undersigned submits that pending claims are allowable over the cited art for the reasons set forth herein and awaits a notice of allowance to this effect. Should the Office have additional questions which would facilitate efficient prosecution of this application, please do not hesitate to contact undersigned at the number provided below.

Respectfully submitted,

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